

CHAPTER 9

NATURAL ENVIRONMENT



City of Liberty Lake Comprehensive Plan

A. Introduction



The Natural Environment Element combines several environmentally related topics, including Critical Areas (wetlands, aquifer recharge areas, fish and wildlife conservation areas, frequently flooded areas and geologically hazardous areas), as well as tree conservation, shorelines, surface water quality and quantity, and air quality. The City of Liberty Lake's natural environment includes the Spokane-Rathdrum aquifer, which is one of the most productive aquifers in the United States. Currently, the City does not contain any designated critical areas, frequently flooded areas, or shorelines, however these areas surround the City and they have been included in this element for future planning or joint planning efforts. A small wildlife corridor is located on the far eastern boundary of the City and the small quantity of wetlands that are contained within the City have already been mitigated. The locations of the wetlands are shown on Map 9.1 within this element.

Natural Environment Element Vision Statements¹

1. Preserve the water quality, beauty, and ecosystem of all bodies of water within or adjoining the City including Liberty Lake and the Spokane River
2. Conserve environmentally sensitive areas
3. Preserve natural beauty

B. History and Background

The City of Liberty Lake has attracted desirable businesses in recent years because of the natural environment that contributes to a high quality of life. Protecting and enhancing this unique natural environment is the purpose of this Chapter. By ensuring the availability of clean air and water, and preserving critical areas and natural features, we will continue to make the City of Liberty Lake an inviting community. The following are the guiding principles for this element.

- Critical areas, including wetlands, fish and wildlife habitat, aquifer recharge areas, geologically hazardous areas, and flood hazard areas, shall be preserved, protected, managed, and restored so that the functions and values of these areas are maintained.
- Shoreline areas shall be protected from land uses that degrade water quality and wildlife habitat.
- Surface and groundwater should be maintained at adequate quantity and quality, with land uses designed to ensure continued protection.
- Air quality shall be maintained at levels that protect human health, prevent injury to plants and animals, and preserves clear visibility.

C. Goals and Policies

Critical Areas

Critical areas include the following areas and natural places:

1. wetlands;
2. areas with a critical recharging effect on aquifers used for domestic purposes;

¹ Vision Statements were created by the Planning Commission and City Council to reflect citizen comments.

3. fish and wildlife habitat conservation areas;
4. frequently flooded areas;
5. geologically hazardous areas.

The City of Liberty Lake recognizes the importance of protecting the functions of critical areas. Preservation of these areas helps to maintain the high quality of life that is enjoyed by the residents of Liberty Lake. These natural systems play valuable roles in stormwater disposal, flood prevention, and water quality preservation, as well as providing recreational opportunities. Protection of critical areas makes economic sense, since the alternative is expensive engineered systems for protection from floods and geological hazards and for purification of drinking water. The Critical Areas Goals and Policies establish allowable uses in critical areas and provide development standards to mitigate impacts of development. Better information is needed to refine critical area designations and management recommendations. Effective protection requires an interdisciplinary approach to the evolution of *best available science*. Involvement by scientists from the Washington State Department of Fish and Wildlife, Department of Ecology, area universities, and others will continue to be essential to the advancement of critical area protection.



Overall Critical Areas Goals

Several issues that are common to all critical areas have been identified. These issues are addressed in this section. The underlying approach to critical-area stewardship involves private conservation organizations, businesses, individual landowners, and the general public, as well as government. The following goals should be used together with the specific goal sections of each critical area.

Goals

NE.1a: The City of Liberty Lake will encourage management of critical areas in such a way that includes education, rehabilitation, preservation, protection, enhancement, mitigation, and incentives for protection.

NE.1b: Land use regulations and land use decisions in the City shall protect critical areas. Regulatory mechanisms such as limitations on land use or buffering requirements or programs such as transfer of development rights and acquisition of development rights should be used to retain critical areas whenever possible.

NE.1c: The City of Liberty Lake will review and update its Critical Areas goals, policies, and regulations at least every five years and best available science will be used in the designation and protection of critical areas.

NE.1d: Ongoing public participation is a vital element of critical area regulations and management programs. The City will actively seek individuals or local groups to assist in identifying and protecting critical areas.

NE.1e: The City of Liberty Lake will determine the *carrying capacity* (the level of population and activity that the natural resource base can healthfully support) and will use that information in its land use decisions regarding critical areas. In some cases, critical areas are fragile and public access should be controlled.

NE.1f: Regulations developed by the City of Liberty Lake will not result in or constitute a taking of private property and shall be evaluated as provided for in RCW 36.70A.370.

NE.1g: Regulations to protect the natural environment shall recognize nonconforming rights for existing land uses and activities.

NE.1h: Encourage cooperative and coordinated protection programs for critical areas between the City of Liberty Lake and Spokane County.

NE.1i: Cumulative effects of land use activities on critical areas shall be considered in land use decisions.

NE.1j: Consider the multiple uses of open space and wildlife corridors for other uses, as recommended by qualified wildlife managers, such as utility corridors when conflicts do not exist or can be mitigated.

Policy

NE.1.1: It will be the responsibility of the City of Liberty Lake Planning & Community Development Department to coordinate the identification of best available science and to provide a recommendation to decision-makers for use in designating and protecting critical areas and shorelines, pursuant to RCW 36.70A.172, WAC 365-195-900, RCW 90.58.100(1) and WAC 173-26-020.

Wetlands

Wetlands are areas inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention and retention facilities, wastewater treatment facilities, farm ponds, and landscape amenities. However, wetlands may include those artificial wetlands intentionally created from non-wetland areas to mitigate conversion of wetlands, if permitted by the City. In the past, wetlands were considered nuisances to be filled in and covered up. Experience has revealed the many beneficial functions provided by wetlands, including providing wildlife habitat, storage and disposal of stormwater, groundwater recharge and removal of contaminants. The primary purpose of the wetland goals and policies is to preserve these important natural functions.

Goal

NE.2: Ensure “no net loss” of wetland functions, value, and quantity as a result of land use activities and establish a long-term goal of measurable gain of wetlands function and value.

Policies

NE.2.1: Create new and use existing incentives to control wetlands access and use.

NE.2.2: Maintain a wetlands inventory and monitor achievement of the “no net loss” goal.

NE.2.3: Strive to attain a measurable gain of wetlands function and value.

NE.2.4: New development shall not impact wetlands.

NE.2.5: Expansion of nonconforming uses in wetlands and their buffer areas should not be allowed.

Goal

NE.3: Establish wetland management programs that include identification of wetlands and a classification system.

Policies

NE.3.1: Establish appropriate wetlands classification, which should include buffer areas to maintain wetlands natural functions and beneficial values.

NE.3.2: Land use decisions and land use activities should be consistent with existing wetland regulations. New regulations should provide clarification as to appropriate and inappropriate land use activities within a wetland and its buffer area.

NE.3.3: New regulations developed should recognize the potential impact to wetlands that are located within planned urban areas.

NE.3.4: Wetland alteration from development or other activities should not cause adverse impacts to the wetland or its buffer area.

NE.3.5: Proposals for wetland restoration, creation, or enhancement shall include consultation with the appropriate agencies to ensure adequate design and consistency with other applicable regulations.

NE.3.6: Land use regulations/ decisions should consider density transfers, transfer of development rights, bonus density, natural wetland preserves, wetland banking, or other mechanisms to retain wetlands.

NE.3.7: Encourage public and private groups to consider protection and/or acquisition of wetlands and their buffer areas.

Goal

NE.4: Protect and enhance wetlands so that they are able to perform their natural functions and maintain their beneficial values.

Policies

NE.4.1: Maintain the natural ability of wetlands to store and gradually release drainage and stormwater.

NE.4.2: Discourage development and/or land use activities which will adversely impact wetlands' ability to store and discharge drainage and/or floodwater storage.

NE.4.3: Retain, restore and/or enhance native and/or appropriate vegetation to slow velocity of stormwater runoff and improve surface and groundwater quality.

NE.4.4: Protect wetlands from erosion and siltation.

NE.4.5: Restore and enhance native and/or appropriate vegetative types in wetlands and their buffer areas.

NE.4.6: Protect water quality and quantity within wetlands by preventing overuse of surface and groundwater beyond recharge capacities.

NE.4.7: New development and/or land use activities shall provide adequate buffer areas of permanent native and/or appropriate vegetation adjacent to wetlands. These buffer areas shall be established based on the natural function and beneficial values of the wetland as determined by established criteria.



NE.4.8: Existing surface water and groundwater quality and quantity should be protected where new development or land use activities would impact a wetland or its buffer area.

NE.4.9: New developments and/or land use activities should be designed to preclude the need for flood control structures or designs that alter wetlands and their shoreline characteristics.

NE.4.10: New developments and/or land use activities should design circulation systems, roads, trails, and other such facilities to protect wetlands from erosion and reduce the amount of soil, silt, and pollutants entering wetland areas.

NE.4.11: Avoid new development and/or land use activities that would significantly impact native and/or appropriate vegetation, cause substantial erosion or sedimentation, or adversely affect aquatic life or the biophysical capabilities within a wetland habitat.

NE.4.12: Wetlands shall be protected and should be improved for use as fish and wildlife habitat by providing buffers and protection of adjacent riparian environments.

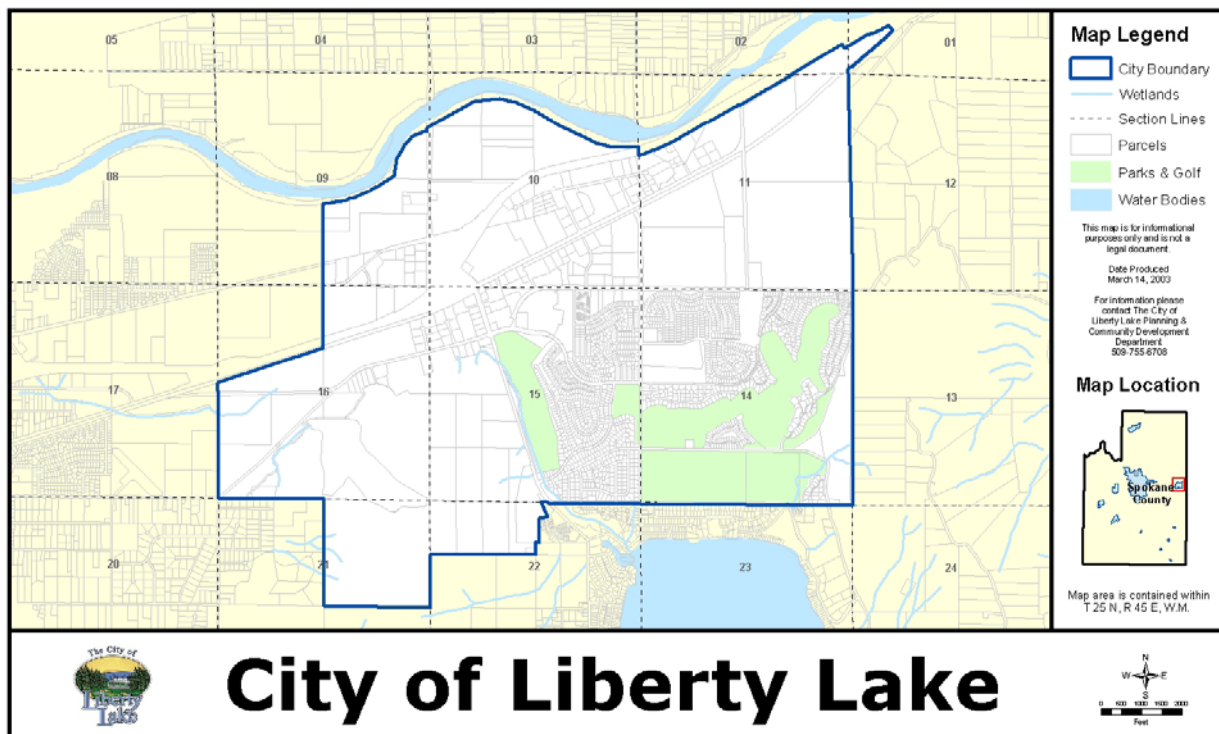
NE.4.13: Recognize and provide protection for wetlands that provide wildlife habitat for priority species and species of local significance, as defined under the Fish and Wildlife Habitat Conservation Area goals and policies.

NE.4.14: Encourage the preservation of wetlands associated with wildlife habitat corridors.

NE.4.15: Existing vegetation providing wildlife habitat in habitat corridors should be maintained or improved to offset habitat loss by human activities/ development.

NE.4.16: Encourage partnerships that will result in matching funds and maintenance cost programs to acquire at least joint ownership of wetlands and their buffer areas.

MAP 9.1 - WETLANDS



Aquifer Recharge Areas and Groundwater

Underground aquifers are the sources of nearly all the drinking water for the City of Liberty Lake. The purpose of the following goals and policies is to ensure the long-term quality of groundwater as a source of drinking water in Liberty Lake. The Spokane Rathdrum Aquifer supplies most of the drinking water used in the urban area and is designated as a *sole source aquifer* by the federal Safe Drinking Water Act. Contaminants deposited in aquifer recharge areas pose risks to the water quality of the aquifers. To ensure quality groundwater, the City of Liberty Lake is required to designate and protect critical aquifer recharge areas. A critical aquifer recharge area is an area with a critical recharging effect on aquifers used for potable water. The goals and policies of this section provide guidance to protect our aquifers and critical aquifer recharge areas.

Goals

NE.5a: Prevent degradation of groundwater quality in Liberty Lake area aquifers.

NE.5b: Protect groundwater quality from development impacts.

NE.5c: Mitigate the effects of natural or un-natural events that lower aquifer water quality below minimum state standards.

Policies

NE.5.1: Draft clear and manageable measures for the purpose of protecting critical aquifer recharge areas.

NE.5.2: Utilize regulations developed for the Spokane Rathdrum Aquifer.

NE.5.3: Re-evaluate aquifer protection measures at least every five years and amend as necessary.

NE.5.4: Evaluate proposed land use changes for both positive and negative impacts on groundwater quality, especially in moderate and highly susceptible critical aquifer recharge areas.

NE.5.5: Discourage development that would have a significant negative impact on the quality of an aquifer.

NE.5.6: Coordinate aquifer protection with Wellhead Protection programs by identifying wellhead protection areas, designated by a public water supplier, as highly susceptible critical aquifer recharge areas.

NE.5.7: Require wastewater management systems appropriate for the industry when potentially critical materials, as defined in the uniform building and fire codes, as updated, are used by an industry.

NE.5.8: Require appropriate stormwater runoff and spill control provisions for those who use and/or store potentially critical materials within critical aquifer recharge areas.

NE.5.9: Support and develop wellhead protection measures.

NE.5.10: Prohibit new industries that will store, handle, or use potentially critical materials from locating within a wellhead protection area designated by a public water supplier.

NE.5.11: New industries that will store, handle, or use potentially critical materials should be encouraged to locate outside of highly susceptible critical aquifer recharge areas.

NE.5.12: Solid waste disposal sites (landfills) shall be prohibited within critical aquifer recharge areas of medium and high susceptibility; except that inert and/or demolition solid waste disposal sites may be allowed within critical aquifer recharge areas of medium susceptibility, provided adequate safeguards are in place to protect surface and groundwater.

NE.5.13: In situations of documented contamination of public water supplies in violation of Washington State water quality standards, development, which would either contribute to or be impacted by the pollution shall be prohibited until such time as all necessary utilities, facilities, and services can be provided in compliance with applicable standards.

NE.5.14: Encourage development activities that do not use potentially critical materials in highly susceptible critical aquifer recharge areas.

NE.5.15: Sewer service, stormwater runoff, and spill-control provisions shall be provided when potentially critical materials are used, handled, or stored by industries or other land uses when they are located within critical aquifer recharge areas.

NE.5.16: Best management practices should be utilized to treat stormwater runoff prior to injection into the ground.

NE.5.17: Encourage the application of permeable and semi-permeable surfaces to parking areas and other innovative storm water control alternatives to facilitate storm water treatment and disposal.

Goal

NE.6: Secure adequate water quantity for the residents of the City of Liberty Lake without artificially over-allocating available resources to any single customer or group of customers.

Policies

NE.6.1: Manage surface- and ground- waters throughout the City to stay within recharge capabilities.

NE.6.2: Identify and map those aquifers from which annual withdrawals exceed annual water recharge, and implement density control limitations, water importation, or other means to prevent further depletion of the water resource.

NE.6.3: Promote water conservation through education, incentives, and regulations in cooperation with water purveyors and the public.

NE.6.4: It is recognized that aquifers in the City of Liberty Lake used for drinking water may have all or part of their recharge areas located outside of the City. Accordingly, the City of Liberty Lake should coordinate and collaborate with surrounding jurisdictions to protect groundwater.

NE.6.5: Recognize the Spokane Rathdrum Aquifer as a finite resource.

NE.6.6: Discourage new water wells or increases in the extraction of water from existing wells in aquifers where water withdrawals exceed aquifer recharge.

NE.6.7: In future updates of the Coordinated Water Supply Plan, work with water purveyors to standardize future water use projections based on population projections.

NE.6.8: Support efforts to limit water use, allowed under the state domestic exemption rule, to providing supplies for residential uses.



NE.6.9: Water-conserving landscaping and other conservation practices should be encouraged. Incentives should be used to reduce water consumption.

NE.6.10: Special consideration should be given to proposed developments or activities that recycle or find use for wastewater.

NE.6.11: Explore the idea of requiring double metering for irrigation use in all new developments.

Goal

NE.7: Provide public information programs for land users to demonstrate how to protect critical aquifer recharge areas from degradation.

Policies

NE.7.1: Provide the public with information on practices that threaten water quantity and quality.

NE.7.2: Encourage all land users to employ *best management practices* appropriate to their land use to discourage excessive water use and to protect public health and safety.

NE.7.3: Provide convenient public access to groundwater modeling documents and regulations to protect critical aquifer recharge areas.

NE.7.4: Make the public aware of the long-term expense and public health consequences of failure to protect critical aquifer recharge areas from degradation.

NE.7.5: Encourage area schools, colleges, and universities to include education about groundwater pollution prevention.

NE.7.6: Encourage area civic groups to become involved with groundwater protection.

NE.7.7: When feasible, support incentives to reduce the use of hazardous chemicals by households and businesses.

Goal

NE.8: Consistently enforce regulations, effectively monitor compliance, and provide regulatory incentives to protect critical aquifer recharge areas.

Policies

NE.8.1: In moderate and highly susceptible critical aquifer recharge areas, no variances, deviations, or exceptions to the groundwater protection regulations shall be allowed.

NE.8.2: Include clear and manageable compliance requirements to protect groundwater in the construction and occupancy permit system.

NE.8.3: Commit adequate resources to permit monitoring and enforcement, including qualified staff with necessary support.

NE.8.4: Conduct a review of regulations at least every five years to make sure they reflect:

1. changing conditions in the environment;
2. growing scientific knowledge of the quantity and quality of the existing groundwater resource;
3. best management practices for that resource.

NE.8.5: Develop a system of incentives that will lead to the greatest protection of the groundwater resource.

NE.8.6: Encourage voluntary land exchange for the purpose of aquifer protection so that critical aquifer recharge areas that are highly susceptible to contamination have the protection of public ownership.

NE.8.7: Enable transfer of development rights from critical aquifer recharge areas to other suitable sites.

NE.8.8: The City of Liberty Lake shall aggressively identify causes of water quality problems and propose and implement solutions where feasible.

NE.8.9: Designate and maintain one office for coordinating groundwater quality issues in the City of Liberty Lake.

NE.8.10: Create a source of information on best management practices for groundwater protection.

Goal

NE.9: Regularly update critical aquifer recharge area protection measures so they are effective, enforceable, and equitable.

Policies

NE.9.1: Update the aquifer susceptibility analysis when sufficient new information is available to justify an update.

NE.9.2: Conduct additional studies to better define the extent of contamination, physical extent, water capacity, background water quality, and the rate of flow of water in local aquifers.

NE.9.3: Reconsider and revise the list of critical materials every five years.

NE.9.4: Regularly revise aquifer protection measures to reflect additional best available information.

Contamination Susceptibility of Aquifers

Surface Water Quantity and Quality

Water quality and quantity influences the domestic, economic, recreational, and natural environments of the City of Liberty Lake. Historically, clean water has been taken for granted. As growth and development have increased, so have problems associated with maintaining water quality and quantity. Industry, commercial business, agriculture, and residences all contribute to reduced water quality and quantity. From this perspective, a comprehensive approach must be taken to ensure future water quality and quantity.

Stormwater

The increased impervious area resulting from development changes the amount and the quality of runoff water. If left unmanaged, discharges of stormwater can cause flooding and water quality degradation, especially in already impaired water bodies. Increased impervious areas may also adversely impact groundwater recharge. Long-term solutions to stormwater problems will require creative problem-solving on a case-by-case basis. In drainage basins where

development has already occurred, much of the natural stormwater system may be altered so that it no longer functions effectively. In areas where wetlands have been filled and natural drainageways altered, substantial investment in stormwater collection and disposal systems will be required. In newly developing areas where stormwater disposal has not yet become a problem, it is important to preserve the natural system of wetlands and drainageways to prevent problems from occurring as a result of future development.

Goals

NE.10a: Assure continued provision of both adequate quantity and quality of surface water for the City of Liberty Lake.

NE.10b: Encourage land uses which are consistent with long-term protection of surface water quality and quantity in Liberty Lake.

NE.10c: Work with other jurisdictions to restore water quality in any currently impaired surface waters surrounding the City.

Policies

NE.10.1: Water quality and wastewater management plans should consider methods of storm water and waste water disposal that reduce impact on surface and ground water such as irrigation of golf courses, parks, and landscaping.

NE.10.2: Within Liberty Lake drainage areas or other areas with drainage problems, special studies and/or conditions of approval for development proposals may be required if necessary to mitigate storm water runoff and other pollution sources.

NE.10.3: Impacts of a proposal upon surface water quality shall be considered before development is approved. Denying or conditioning proposals may be necessary to protect water quality.

NE.10.4: Develop and maintain an area wide Water Quality Management Plan that is coordinated with the City of Liberty Lake Comprehensive Plan and the Water Quality Management Plans of adjacent jurisdictions.

NE.10.5: Liberty Lake shall develop an education program to inform its people of the sensitivity of the surface water to both excess use and contaminants. The purpose of the program would be to reduce contamination. Liberty Lake will review the program and adopt specific changes to fit the needs of our unique situations.

NE.10.6: Support the establishment of a minimum flow standard for the Spokane River that is adequate to protect wildlife and maintain water quality.

NE.10.7: The more restrictive residential density requirements imposed either by the Critical Aquifer Recharge Area or Surface Water Quality and Quantity goals and policies, or by each land use category's goals and policies, shall apply.

NE.10.8: Trucks and trains carrying critical materials should be encouraged to use preferred critical material routes where emergency spill response plans exist.

NE.10.9: Treated sanitary wastewater shall meet or exceed the Department of Ecology standards prior to discharge to surface waters.

NE.10.10: Where increased storm water runoff potential exists due to a proposed development, runoff management procedures shall be required.

NE.10.11: Establish enforcement procedures for the safeguarding of surface waters

NE.10.12: Time extensions for approved preliminary plats, short plats, and binding site plans shall be subject to current applicable local, state, and federal regulations regarding water quality protection.

NE.10.13: Work with agricultural agencies to limit the use of excessive fertilizer, pesticide, and herbicide application, and work toward finding other, less damaging soil fertilizers for use on golf courses and other landscaped areas.

NE.10.14: Encourage biological water treatment using native plants.

NE.10.15: Continue the ban on phosphorus in detergents, and expand the ban to other products which introduce phosphorus into the environment.

NE.10.16: Implement standards that adequately control erosion from development sites. Special emphasis should be placed on erosion and stormwater control from private roads, which may affect surface waters.

NE.10.17: Explore the opportunities that exist for establishing a Lake Management District.

Fish and Wildlife Habitat Conservation Areas

Fish and Wildlife Habitat Conservation Areas include:

- Areas with which specifically identified species have a primary association. These specifically identified species include: endangered, threatened, sensitive and candidate; and secondarily: monitor and priority species (game and non-game), as identified by the Department of Wildlife in the Priority Habitats and species lists, hereinafter referred to as *priority species*, compiled in compliance with WAC-365-190-080.
- Habitats and species of local importance.
- Naturally occurring ponds under 20 acres and their submerged aquatic beds that provide fish or wildlife habitat.
- Waters of the state.
- Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity; or
- State natural area preserves and natural resource conservation areas.

Fish and Wildlife Habitat Conservation means land management for maintaining species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created. This does not mean maintaining all individuals of all species at all times, but it does mean cooperative and coordinated land use planning is critically important among counties and cities in a region. Fish and wildlife are part of our heritage. Fishing, hunting, and simply watching wildlife are valued recreational activities that contribute to the local economy and quality of life. Preservation of the fish and wildlife habitat is the key to the continued existence of these species in the future. The following goals and policies articulate the high value that community residents place on conservation of the local fish and wildlife.

Goals

NE.11a: Identify fish and wildlife habitat conservation areas and their ecosystems. Recognize the multiple values of fish and wildlife habitat conservation areas and educate people as to these values.

NE.11b: Protect, maintain, and improve critical fish and wildlife habitat conservation areas and habitats of local importance through a variety of methods including public ownership of the most critical areas and incentives for privately owned land.

Policies

NE.11.1: Guide development by environmental concerns, including natural limitations of habitat. Incentives and mitigation measures may be used to guide development.

NE.11.2: Land use regulations and decisions shall consider density transfers, bonus density, nature area preservation, or other innovative mechanisms to retain Fish and Wildlife Habitat Conservation Areas whenever possible.

NE.11.3: Development proposals and their design shall consider the retention and maintenance of critical fish and wildlife habitat areas and shall provide buffers to protect corridors and water habitats.

NE.11.4: The City of Liberty Lake will seek individuals and/or groups to assist in identifying and protecting species and habitats of local importance.

NE.11.5: Prevent the introduction of species which have an unknown or negative impact on current native habitats.

Goals

NE.12a: The City of Liberty Lake shall strive to minimize fragmentation of habitat by protecting important fish and wildlife areas and open space; and by interconnecting corridors to form a continuous network of fish and wildlife habitat and ecosystems with adjacent areas.

NE.12b: The City of Liberty Lake shall strive to ensure that priority fish and wildlife species as identified by the Washington Department of Fish and Wildlife and species of local importance do not become imperiled due to land use changes, habitat alteration, and other human activities.

Policies

NE.12.1: Recognize that the Washington State Department of Fish and Wildlife (WDFW) manages fish and wildlife resources and that the City of Liberty Lake should coordinate with WDFW in land use planning and management of fish and wildlife resources.

NE.12.2: The City of Liberty Lake shall strive to implement measures that contribute to the recovery and/or management of priority species.

NE.12.3: Encourage restoration of lost and damaged habitats.

NE.12.4: Activities allowed within designated Fish and Wildlife Habitat Conservation Areas should not compromise the areas' habitat quality or function. Compatible uses may include rangeland, forest production, open space, and passive recreation.

Tree Conservation

Much of the landscape surrounding the City of Liberty Lake is dominated by evergreen forest. The aesthetic appeal of the area is closely linked to the native vegetation, especially the trees. The conifers that cover the hills and mountains are important to the economy of the area as a renewable natural resource for paper and building materials. However, the aesthetic and wildlife habitat value of the trees also contributes to the economy of the area to a significant extent. The aesthetic value and wildlife associated with the forested landscape continues to be a force that draws people and jobs to this area. For the area to maximize its economic development potential, it is essential that Liberty Lake conserve its identity as an area of scenic natural

beauty. To this end, conservation of the trees that are native to this area must be considered as part of the development process.

Goal

NE.13: Preserve the unique natural beauty of Liberty Lake by conservation of the native trees through public education, conservation incentives, and special consideration in the development process.

Policies

NE.13.1: Encourage public awareness of the increased property values associated with tree conservation.

NE.13.2: Encourage programs that provide assistance to the public in caring for and nurturing trees.

NE.13.3: Encourage tree-planting programs that emphasize native species and encourage species diversity.

NE.13.4: Adopt tree conservation development regulations that discourage removal of mature trees, require appropriate tree replanting when removal is necessary to accommodate development, and provide incentives to conserve trees.

NE.13.5: Adopt policies consistent with attaining a “Tree City USA” designation.

Frequently Flooded Areas

Frequently flooded areas are lands in the floodplain subject to a 1-percent or greater chance of flooding in any given year. These areas include, but are not limited to, streams, rivers, lakes, sink areas, major natural drainageways, and wetlands. Frequently flooded areas are natural physical features of a watershed that play an important role in stormwater storage and disposal. The purpose of these goals is to maintain the natural function of these frequently flooded areas in order to protect private and public property and reduce the need to construct flood control facilities as well as protect the environment.

Goal

NE.14: Recognize the multiple values of frequently flooded areas and educate people as to those values.

Policy

NE.14.1: Recognize that frequently flooded areas are a natural physical feature of a watershed. The function of a frequently flooded area is to convey and store runoff during periods of heavy rainfall and snowmelt when overtopping of the normal river, stream, or drainage channel occurs and adjacent low-lying areas are flooded.

Goal

NE.15: Identify frequently flooded areas and drainage ways, sink areas, runoff areas, floodways, and meander belts that contribute to frequently flooded areas.

Policy

NE.15.1: Standard hydrologic and hydraulic study methods shall be used to identify frequently flooded areas.

Goal

NE.16: Protect and improve the natural dynamics of frequently flooded areas.

Policies

NE.16.1: Frequently flooded areas, marshes, floodplains, and floodways should be used as rangeland, forest, wildlife habitat, open space, recreation, and other appropriate uses.

NE.16.2: Minimize impacts of new development on existing floodplains and frequently flooded areas through design that accommodates flood events without property damage.

NE.16.3: Maintain, protect, or restore natural drainage systems to protect water and environmental quality.

NE.16.4: The natural drainage network should be preserved and utilized for flood control and to maintain environmental quality.

NE.16.5: New developments and land use activities should be designed to:

1. Protect the drainage functions of flood plains, natural drainageways, sink areas, and other existing drainage facilities.
2. Preserve and incorporate natural features such as streams, ponds, significant drainageways, and wetlands in a manner that maintains their natural functions.
3. Consider the site's topography as it relates to frequently flooded areas in the design and placement of physical improvements such as roads and structures.
4. Retain natural vegetation strips adjacent to the high water mark of a perennial or intermittent stream or other frequently flooded areas.
5. Retain trees and native vegetation that contribute to controlling erosion on slopes adjacent to frequently flooded areas.

Goal

NE.17: Manage frequently flooded areas to enhance environmental quality and to minimize the risks to life and property.

Policies

NE.17.1: Minimize impacts from flooding problems such as erosion, property damage, potential property devaluation, and impaired ground and surface water quality.

NE.17.2: Use bioengineering techniques, where possible, rather than hard engineering structures to stabilize the floodway if risk to life or property is threatened.

NE.17.3: Permit and encourage land uses compatible with the preservation of natural vegetation within frequently flooded areas.

NE.17.4: Development should not occur on lands identified as being within a 100-year floodplain (1-percent or greater chance of flooding in any given year) or as having a history of flooding, unless the developer provides mitigation measures acceptable to the appropriate regulatory agency.

NE.17.5: Assist in updating the federal floodplain map.



Geologically Hazardous Areas

Geologically hazardous areas are areas that, because of their susceptibility to erosion, sliding, earthquake, or other geological events, are not suited to siting commercial, residential, or industrial development consistent with public health or safety concerns. The purpose of these goals and policies is to ensure that areas subject to geological hazard are identified so that hazard mitigation is incorporated into designs. The public safety must be protected by prohibition of development in geologically hazardous areas unless hazard mitigation is assured.

Goal

NE.18: Development should be discouraged in geologically hazardous areas unless it can be demonstrated that a hazard area can be developed consistent with public health and safety. Development permits may be conditioned to mitigate certain hazards.

Policies

NE.18.1: Any new subdivision or short subdivision that is determined to be in a geologically hazardous area where significant risk has been identified shall have specific language placed on the face of the plat (dedication) and title stating that the hazard is present.

NE.18.2: Residential, commercial, and industrial development in geologically hazardous areas should minimize disruption of existing topography and vegetation; and shall incorporate opportunities for phased clearing and grading.

NE.18.3: Construction should minimize risk to the natural environment and/or structures. Construction shall not increase the risk to the site and/or potentially affected adjacent properties.

NE.18.4: Clearing and grading activities in geologically hazardous areas shall consider limitations based upon seasonal weather conditions.

NE.18.5: Within geologically hazardous areas, site alteration, grading, and filling shall be the minimum necessary to accomplish approved designs/plans.

NE.18.6: Proposals should describe the hazards present, such as erosion, landslides, etc., and provide mitigation measures acceptable to the appropriate regulatory agency.

NE.18.7: Construction and development on geologically hazardous areas should have negligible effects on the quality and quantity of potentially affected surface and groundwater. Mitigation measures acceptable to the appropriate regulatory agency should be provided.

NE.18.8: Development in geologically hazardous areas should not be allowed without appropriate mitigation.

NE.18.9: Development proposals within geologically hazardous areas should submit an erosion control plan prior to receiving approval.

NE.18.10: Land use regulations and decisions should consider density transfers, bonus density, nature belt preservation, or other innovative mechanisms to retain geologically hazardous areas whenever possible and to facilitate implementation of the goals and policies for geologically hazardous areas.

Goal

NE.19: Geologically hazardous areas may be used as open space for recreation, rangeland, forest, wildlife habitat, and other uses as appropriate.



Policies

NE.19.1: Geologically hazardous areas demonstrated to be highly sensitive to modification by development activities shall be preserved in a natural condition for uses other than development.

NE.19.2: These highly sensitive areas should be inventoried and reviewed for consideration of the most appropriate non-development related use.

Shorelines

Shorelines are among the most valuable and fragile of environments. The purpose of these goals and policies is to manage the use of the shorelines, so that their protection, preservation, and restoration are assured. The intent is to foster reasonable and appropriate use of the shorelines but also to protect the natural character of the shorelines, preserve the ecology and resources, increase public access to publicly owned shorelines, and to increase recreational opportunities for the public. Bodies of water with a mean annual flow of greater than 20 cubic feet per second (in the case of flowing water) and an area greater than 20 acres (in the case of standing water) are considered *Shorelines of the State* and are subject to the Shoreline Management Act (SMA). The SMA area of jurisdiction is the body of water together with an adjacent strip of land generally 200 feet wide, measured landward from the ordinary high watermark. In compliance with the SMA, the City of Liberty Lake adopted the Spokane County Shoreline Management Program by reference prior to incorporation. The Shoreline Management Program established goals, policies, and regulations to protect shoreline areas. RCW 36.70A.480 requires that the Shoreline Master Program goals and policies be considered as part of the Comprehensive Plan.

Goal

NE.20: Protect shorelines in Liberty Lake designated under the state Shoreline Management Act with the Spokane County Shoreline Master Program until it is replaced or amended under pending state law and administrative regulations.

Policies

NE.20.1: The Spokane County Shoreline Program shall be updated once legislative changes are enacted to ensure consistency between the Shoreline Management Program and the Critical Areas Program, as needed.

NE.20.2: The Spokane County Shoreline Program, as adopted and amended, is included by reference as part of this plan.

NE.20.3: The Spokane County Shoreline Program shall be reviewed and updated periodically as required by law and as needed.

Watersheds

The City of Liberty Lake should conduct ongoing watershed stewardship activities. The goals of watershed stewardship are to increase public awareness about watershed management efforts and to get participation in the process to ensure stewardship on residents' property and homes. Promoting watershed advocacy is important because it can lay the foundations for public support and greater watershed stewardship. Most watershed protection tools require maintenance if they are to properly function over the long run. Some of the most critical watershed maintenance functions include management of conservation areas and buffer

networks, and maintenance of stormwater practices and sewer networks. There are six basic programs that can promote greater watershed stewardship:

- Watershed advocacy
- Watershed education
- Pollution prevention
- Watershed maintenance
- Indicator monitoring
- Watershed restoration

Goal

NE.21: The City of Liberty Lake will participate in programs to increase watershed stewardship and overall watershed protection.

Policies

NE.21.1: The health of the watershed shall be monitored.

NE.21.2: The City shall support public education about watershed management and stewardship.

NE.21.3: The City shall provide opportunities for the public to actively engage in watershed protection and restoration.

NE.21.4: Best available science should be used when dealing with watershed protection and restoration.

Air Quality

Several conditions contribute to air pollution in Liberty Lake. Human activities, including automobile use, wood stove use, and industrial and agricultural operations, generate airborne substances that can affect air quality. In addition, the Spokane area has been affected substantially by windblown dust from the entire central portion of the State. The Spokane Valley is also a natural basin in which air pollution is concentrated by an occasional *temperature inversion* (a situation in which lighter warm air overlies heavier cool air). A variety of air pollution control strategies have been employed in the City of Liberty Lake. The strategies include auto emission inspections, restrictions on open burning, wood stove certification, restriction on wood stove use when pollution levels are high, oxygenated fuels for cars, road paving, use of chemical deicers as an alternative to road sanding, and others. These measures, combined with cleaner-burning cars, have significantly improved air quality. However, traffic volumes continue to increase which could lead to degradation of air quality in the future. Air quality is intricately related to land use and transportation. The challenge presented to the region is to balance land use, transportation, and air quality in such a way that the community can continue to grow and prosper without compromising quality of life.

Goals

NE.22a: Maintain air quality in the City of Liberty Lake that protects human health, prevents injury to plant and animal life, and preserves clear visibility.

NE.22b: Promote the physical, economic, and social development of Liberty Lake that is consistent with a good air quality and visibility.

NE.22c: Comply with federal and state air quality standards.

Policies

NE.22.1: Establish a variety of transportation systems as alternatives to the single occupancy vehicle such as dispersed employment opportunities, flexible working hours, telework, light rail, other transit, car pooling, bicycling and walking paths.

NE.22.2: Establish multiple high-density travel corridors while preserving the unity of established neighborhoods.

NE.22.3: Encourage the development and expansion of high-density urban centers that facilitate alternative transportation modes to reduce traffic congestion.

NE.22.4: Support regional efforts to improve air quality.

NE.22.5: Promote public education to increase the level of responsibility for air quality.